



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,197	11/14/2003	Ramabhadran Balaji	AVERP2203USA	2666
7590 07/22/2008 Heidi A. Boehlefeld Renner, Otto, Boisselle & Sklar, LLP Nineteenth Floor 1621 Euclid Avenue Cleveland, OH 44115-2191				
EXAMINER WOOD, ELLEN S				
ART UNIT 1794		PAPER NUMBER		
MAIL DATE 07/22/2008		DELIVERY MODE PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/714,197

**Applicant(s)**

BALAJI ET AL.

**Examiner**

ELLEN S. WOOD

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 5-10, 12-18 and 20-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 5-10, 12-18, and 20-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S508)  
Paper No(s)/Mail Date 4/28/2008
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 5-10, 12-18, and 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohno et al. (US 5,811,163, hereinafter "Ohno").

In regards to claims 1 and 5, Ohno discloses a in mold label which has a thermoplastic resin film base layer (core layer) and a heat sealable resin layer (abstract). The thermoplastic film base layer (2) has two surfaces, wherein the heat seal layer (4) is positioned on what will be considered the first surface of the thermoplastic resin film base layer (col. 2 lines 38-41 and fig. 1). The heat sealable resin layer comprises as the main component an ethylene/ $\alpha$ -olefin copolymer obtained by copolymerizing ethylene and an  $\alpha$ -olefin having from 3 to 30 carbon atoms using a metallocene catalyst (col. 3 lines 68-62).

In regards to claim 6, Ohno discloses that the Q value (Mw/Mn ratio) is 4 or less, preferably 3 or less (col. 12 lines 21-25).

In regards to claims 7-8, Ohno discloses that the ethylene/ $\alpha$ -olefin copolymer is combined with a high pressure low density polyethylene (col. 16 lines 60-64). High pressure low density polyethylene is a polymer that is known to one of ordinary skill in the art that forms a film. It is also not one of the polyolefins claimed by applicant.

In regards to claim 10, Ohno discloses that the heat seal layer is substantially free of ethylene vinyl acetate (table 1 examples 1-4).

In regards to claim 12, Ohno discloses that the heat seal layer contains the ethylene/ $\alpha$ -olefin copolymer and high pressure low density polyethylene (table 1). There are no additional resins added to the heat seal layer.

In regards to claim 13, Ohno discloses that the thermal shrinkage of the label was determined by measuring the difference between the two measured girth values (col. 15 lines 37-38). The measured girth was that of the unlabeled part and that of a labeled part of the containers (col. 15 lines 35-36). The girth value was 1 mm or less (col. 15 line 38 and table 1). Thus, the examiner constitutes the label having a shrinkage of less than about 5%.

In regards to claim 14, Ohno discloses that the thickness of the label is about 100 $\mu$ m which would be converted to about 4 mils.

In regards to claim 15, Ohno discloses a layer (b) that contains printed matter (col. 14 lines 1-5 and fig. 3).

In regards to claim 18 and 21, Ohno discloses a in mold label which has a thermoplastic resin film base layer (core layer) and a heat sealable resin layer (abstract). The thermoplastic film base layer (2) has two surfaces, wherein the heat seal layer (4) is positioned on what will be considered the first surface of the thermoplastic resin film base layer (col. 2 lines 38-41 and fig. 1). The heat sealable resin layer comprises as the main component an ethylene/ $\alpha$ -olefin copolymer obtained

by copolymerizing ethylene and an  $\alpha$ -olefin having from 3 to 30 carbon atoms using a metallocene catalyst (col. 3 lines 68-62).

In regards to claim 20, Ohno discloses that the copolymer is ethylene/hexane-1 copolymer (table 1).

In regards to claims 22-23, Ohno discloses that the ethylene/ $\alpha$ -olefin copolymer is combined with a high pressure low density polyethylene (col. 16 lines 60-64). It is also not one of the polyolefins claimed by applicant.

In regards to claim 25, Ohno discloses that the heat seal layer is substantially free of ethylene vinyl acetate (table 1 examples 1-4).

Ohno is silent with regards to the peak melt temperature, wherein less than about 25% of polyolefin melts at a temperature of less than 50°C, and the use of EVA.

Ohno discloses that the  $\alpha$ -olefin is used in a proportion of from 2 to 60 wt%, preferably from 5 to 50 wt%, and most preferably from 7 to 30 wt% (col. 4 lines 43-45). The density of the copolymer is from 0.860 to 0.935 g/cm<sup>3</sup> (col. 3 line 67). The Q value is preferably less than 3.0 (col. 12 lines 21-25). The main component an ethylene/ $\alpha$ -olefin copolymer is obtained by copolymerizing ethylene and an  $\alpha$ -olefin having from 3 to 30 carbon atoms using a metallocene catalyst (col. 3 lines 68-62). The applicant states that the peak temperature and less than 25% of the polyolefin melting at less than 50°C are particular properties associated with the polyolefin claimed. These properties are effected by the Q value of the polyolefin and the separation for the low molecular weight fraction from the main fraction of the polymer. The polyolefin used by the applicant has a Q value of from about 1.7 to about 2.3 (pg. 6 lines 13-15). The

olefin is typically present in the amount of 1 to 50 wt%, or from 5 to 30 wt%, or from 7 to about 25 wt% (pg. 7 lines 18-20). The copolymer has an olefin having from 4 to 30 carbon atoms. The density of the polyolefin is from about 0.85 to 0.95 g/cm<sup>3</sup> (pg. 6 lines 11-13). It would be obvious to one of ordinary skill in the art based on the very similar compositions of the polyolefins used by Ohno and the applicant that the properties of the polyolefins would also be very similar. The properties of the polyolefins claimed by applicant are general properties that can be measured by routine experimentation.

Ohno discloses that is not optimal to use EVA on the core material without the addition of another polyolefin resin (table 1). However, it is known and obvious to one of ordinary skill in the art that EVA used alone tends to stick to processing rolls and can damage the film. Thus, EVA is used as a blending component. The blend of EVA and the polyolefin resin would provide a printable layer that also has desirable adhesion properties necessary for in-mold labeling.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1, 5-8, 10, 12-18, and 20-25 have been considered but are moot in view of the new ground(s) of rejection.

The applicant argues that the polyolefin used in Ohno does not possess the same properties of the claimed polyolefin. However, comparing the compositions and other various properties of the two polyolefins one can see that the polyolefins would also possess the peak melting temperature.

The Munpower et al. reference has been withdrawn from the rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELLEN S. WOOD whose telephone number is (571)270-3450. The examiner can normally be reached on Monday-Friday 7-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ellen S Wood  
Examiner  
Art Unit 1794

/Carol Chaney/  
Supervisory Patent Examiner, Art Unit 1794